

New mosses of North America. III.

F. RENAULD AND J. CARDOT.

(WITH PLATES V-VII.)

Dicranella Langloisii.—Cespitose, pale or yellowish green. Stems short, 4–7 mm. long. Leaves small, .75–1.25 mm. long, .25–.35 mm. broad, crowded, erect-spreading when moist, appressed when dry, from an oblong base shortly acuminate, blunt at the denticulate apex, strongly revolute on one side, slightly reflexed or almost plane on the other; costa stout, broad, percurrent, rounded at back; cells of the areolation short, rectangular or subrectangular below, elongated, 4–7 times longer than broad above. Perichæatial bracts longer, longer acuminate; costa shortly excurrent. Pedicel purple, 5–7 mm. long. Capsule suberect, oblong, incurved, reddish-brown, constricted under the orifice when dry, 1 mm. long, .35–.50 mm. broad; lid large, highly convex-conic, with an oblique beak. Peristome purple, high, teeth bifid to above the middle; annulus none.

Louisiana: Saint Martinville, on the ground at the roadsides (*A. B. Langlois*).

Allied to *D. varia*, but readily distinguished by the stronger habit, the leaves much shorter and more shortly acuminate, obtuse or subobtuse and denticulate at the apex, the rounded costa and the shorter cells of the areolation.

Dicranum falcatum Hedw. var. **Hendersoni.**—Pedicel purple below, yellow above.

Oregon: Mt. Hood, moist sunny rocks (*L. F. Henderson*).

Dicranum consobrinum.—Densely cespitose, yellowish green. Stems erect, simple or dichotomous, tomentose, 5–8 cm. long. Leaves rather crowded, secund or erecto-patent, narrowly lanceolate-subulate, serrate in the upper half, 6–7 mm. long, .75–1 mm. broad at base; costa serrate at back toward apex; cell-walls porose, scarcely thickened. Perichæatial bracts sheathing, truncate or emarginate at apex, sometimes muticous, generally tipped with a short or little elongated subula. Pedicel yellow, subflexuous, 2–3 cm. long. Capsule cernuous or horizontal, narrowly cylindraceous, curved, not sulcate, long attenuate below, rufescent when old, 3.50–4 mm. long, .50–.75 mm. broad; lid long subulate. Male plants gemmaceous, nidulant in the tomentum of the female stems.

Minnesota (comm. *Joseph Henry*).

This moss, belonging to the group of *D. scoparium*, is characterized by its very narrow capsule, not sulcate when empty and its perichæatial bracts often emarginate, sometimes muticous or with a shorter subula than in *D. scoparium*.

Fissidens obtusifolius Wils. var. **Kansanus**.—Differs from the typical form in its leaves with a broad border of elongated cells on the margins of the vaginant lamina, and a narrow, more or less distinct border on the dorsal wing.

Kansas: Saline county (*Joseph Henry*).

Didymodon Hendersoni.—In compact tufts, yellowish above, ferruginous below. Stems erect, branched, 1–2 cm. long. Leaves crowded, patulous when moist, subincurved, erect-imbricate in dry state, ovate- or oblong-lanceolate, entire, .75–1.25 mm. long, .35–.50 mm. broad; apex rounded-obtuse or minutely apiculate or subacute; borders revolute but flat below the point; costa stout, rufescent when old, vanishing at or below apex; cells of the areolation small, distinct, thick-walled, irregular, roundish-quadrate, minutely papillose, the lower rectangular, rather elongated toward costa, quadrate or transversely dilated on the borders. Perichæatial bracts not sheathing, oblong-lingulate, obtuse at apex. Pedicel reddish, twisted to the left above, 10–12 mm. long. Capsule erect, cylindrical, badious when old, 2–2.50 mm. long, .35–.50 mm. broad; lid obliquely rostrate. Peristome unknown.

Oregon: Milwaukee, crevices of rocks (*L. F. Henderson*).

This species is nearly allied to *D. luridus* Hsch., from which, however, it is readily distinguished by the yellowish tint, the more slender stems, the longer and paler pedicel, and chiefly by the narrower and more elongated capsule, of a looser areolation of longer and more incrassated cells. From European *D. Lamyi* Sch. it differs also in the form and areolation of the capsule, and, besides, this last species has the leaves more acute, with more elongated basilar cells.

Grimmia tenerrima.—In small, compact, gray tufts. Stems short, 2–6 mm. long. Leaves small, .75–1.25 mm. long, .25–.35 mm. broad, oblongo-lanceolate, the lower muticous or with a short hyaline point, the upper prolonged into a smoothish hair; borders generally reflexed in the upper part; costa canaliculate; basilar cells of the areolation lax; quadrate, pellucid, thin-walled, the upper bistratose, subquadrate

with scarcely thickened walls. Capsule exerted on a short, pale pedicel, small, leptodermous, smooth, yellow or pale brown, .75-1 mm. long, .35-.50 mm. broad; lid convex-apiculate. Peristome orange-red, teeth patulous when dry, papillose, perforated, more or less lacerate at apex. Calyptra cucullate. Male flowers unknown.

Oregon: Mt. Hood, moist bluff towards the snow-line (*L. F. Henderson.*)

This moss, one of the smallest of the genus, is closely allied to *G. alpestris* Schleich., from which it is distinguishable by the smaller size, the shorter capsule and the cells of the areolation larger, with scarcely thickened walls.

Phacomitrium heterostichum Brid. var. **occidentale**.—A remarkable form, characterized by the stems often nearly simple, the pedicel very short, 3-4 mm. long, the capsule small, pale, not shining, and the paler peristome. Perhaps a subspecies.

Oregon; Lost Lake, on rocks (*L. F. Henderson*).

Coscinodon Renauldi Card.—In small, compact, gray or greenish tufts. Stems erect, simple or dichotomous, short, 3-8 mm. long. Leaves small, erecto-patent when moist, imbricate when dry, broadly ovate-lanceolate, rather suddenly acuminate, .75-1 mm. long, .35-.70 mm. broad; costa stout, canaliculate, running out into a long, flexuous, hyaline, slightly toothed hair; borders plane, very entire, rarely sinuate or subdenticulate toward the base of the hair-point; cells of the areolation lax, quadrate, hyaline at base, roundish-quadrate, chlorophyllose, thick-walled in the upper part. Capsule immersed on a very short pedicel, small, globose when young, then ovate-oblong and becoming oblong-subcylindrical and truncate at base when old and empty, leptodermous, soft, 1 mm. long, .35-.50 mm. broad; lid conic, acuminate. Peristome orange or yellow, teeth granulose, very cribose or cleft into 3-4 coherent legs. Calyptra large, sulcate, lobulate at base, covering nearly the whole capsule, or at least descending to below the middle. Male flowers gemmiform, axillary below the female.

Kansas: Saline county (*Joseph Henry*). Colorado (*Mrs. Roy*, kindly communicated by Mrs. E. G. Britton).

Seems to be closely allied to *C. Rauli* Aust. (of which we have seen no authentic specimen), but according to the description given in Lesquereux and James's *Manual*, 155, this last species has the costa "vanishing below the slightly erose-dentate apex of the leaf" and the teeth of the peristome "en-

tire, split merely or perforated here and there on the line of division," while in our moss the leaves are nearly always entire at apex, with the costa distinctly passing into the hair-point and the teeth of the peristome very cribose. Sometimes the hair is greenish at base or, on the contrary, slightly decurrent. It is only on stunted and diseased stems that we have seen the leaves slightly sinuate-denticulate and hyaline at apex, as in *C. Wrightii* Sull., which, on the other hand, is easily distinguished from *C. Renauldi*, just as from *C. Raui*, by its leaves shortly oval or suborbicular and more suddenly constricted at apex.

Orthotrichum Hendersoni. (*Ulota Hendersoni* Ren. and Card. MSS.).—Pulvinate, yellow-green. Stems dichotomous, 1–2 cm. long. Leaves patulous, flexuose when moist, slightly crispate when dry, from an oblong base linear-lanceolate, acuminate, carinate, 2.50–3 mm. long, .35–.50 mm. broad, borders strongly revolute; costa vanishing below apex; cells of the areolation thick-walled, elongated, subrectangular below, roundish or angular, papillose in the upper part. Capsule subexserted on a short pedicel, oval-oblong, suddenly constricted to the pedicel, 8-striate, 1.50–2 mm. long, .50–.75 mm. broad, becoming cylindraceous and contracted below the mouth when old and empty; stomata immersed; lid convex, apiculate, teeth 8, bigeminate, yellow, minutely granulose, not striolate lengthwise, reflexed when dry, split at apex; cilia 8, smooth; vaginula hairy. Calyptra unknown. Spores papillose. Monœcious. Male flowers on a lateral branch.

Oregon: Coast Mts., on bushes (*L. F. Henderson.*)

On account of the crispate leaves in dry state, this moss has the facies of an *Ulota*, but it is allied to *Orthotrichum stramineum* Hsch. and *O. Rogeri* Brid., differing from the first in the narrower, longer, flexuose leaves, twisted and slightly crispate when dry, the longer pedicel, the shorter hairs of the vaginula, the teeth of the peristome more elongated, of a darker yellow, merely split but not cribose-lacinate at apex; and from the last, in the twisted leaves, not excavate at base, and the capsule suddenly contracted below.

Orthotrichum ulotæforme. (*Ulota glabra* Ren. and Card. MSS.).—Pulvinate, yellow-green. Stems dichotomous, 1–2 cm. long. Leaves patulous, flexuose when moist, slightly crispate when dry, from an ovate-oblong base linear-lanceolate, acuminate, carinate, about 3 mm. long, .50 mm. broad; borders strongly revolute, sometimes sinuate at apex; costa

vanishing below apex; cells of the areolation incrassate, lower elongated, narrow, subsinuose, upper roundish or subhexagonal, slightly papillose. Capsule exerted on a long pedicel (4-6 mm.), oblong, 2 mm. long, .75 mm. broad, 8-striate when dry, suddenly contracted to the pedicel; stomata immersed; lid depressed, rostrate. Teeth 8, bigeminate, or 16 more or less connected in pairs, pale yellow, minutely granulose, striolate lengthwise, truncate and split at apex, reflexed when dry; cilia 16, long, nodulose, nearly smooth. Calyptra large, plicate, naked, smooth, lobulate at base. Spores papillose. Flowers monœcious.

Oregon: Coast Mts., on bushes, with the preceding species (*L. F. Henderson*).

The leaves crispate when dry and the long pedicelled capsule give to this moss quite the facies of an *Ulota*, but the large, naked calyptra, lobulate at base, and the immersed stomata, compel us to place it among the *Orthotricha*. Mr. Venturi thinks that it may be proved identical with *O. columbicum* Mitt., but according to the description given by Mr. Mitten in *Journ. Linn. Soc.* viii, 26, this is a quite distinct species, of smaller size, with the capsule short pedicellate and only 8 cilia to the inner peristome. Sullivant considers it as a variety of *O. pulchellum* Brunt. (Cfr. Lesquereux and James, *Manual*, 175).

Orthotrichum pulchellum Brunton var. **productipes**.—Much more robust than the type, with larger leaves, a longer pedicel (4-6 mm.), and the teeth of the peristome larger and paler.

Oregon: Portland, trees and shrubs (*L. F. Henderson*).

Perhaps identical with the *O. pulchellum* var. *longipes* Sull., but the description of this last variety, in *Manual*, 175, is too incomplete to allow a positive identification.

Funaria calcaria Wahl. var. **occidentalis**.—Differs from the type in the leaves mere shortly and broadly acuminate and the longer pedicel (16-22 mm.).

Oregon: Oregon City, wet mud-banks (*L. F. Henderson*).

This plant closely resembles the *F. convexa* Spr., from south Europe, which is also merely a var. of *F. calcaria*; it differs only from it in the longer pedicel and the capsule a little narrower.

Webera cruda Sch. var. **minor**.—Differs from the type in the much smaller size, the narrower capsule and the conic lid.

Oregon: without locality (*L. F. Henderson*).

Bryum Hendersoni.—In robust, yellowish-green tufts. Stems robust, purple, tomentose, erect, dichotomous, 2–4 cm. long. Lower leaves distant, smaller, then becoming gradually larger, upper 3–5 mm. long, 1.50–2 mm. broad, crowded, erecto-patulous when moist, loosely appressed when dry, concave, cucullate at apex, broadly obovate-lanceolate or oblong-subspatulate, short acuminate and reflexed-apiculate by the excurrent costa; margins narrowly revolute, but flat toward the point, strongly serrate above; cells rectangular at base, the lower reddish, oblong-hexagonal in the middle, ovate-hexagonal or rhomboidal in the upper part, the marginal elongated, linear-flexuose and forming a more or less distinct border, generally denticulate above on the back by the prominence of the cell-apices. Pedicel reddish, 3–4 cm. long. Capsule inclined or pendulous, narrowly cylindrical, incurved, constricted below the mouth and tapering to a long attenuate neck; lid convex or subconic, apiculate, teeth yellow, densely trabeculate; segments split; cilia 1–3, appendiculate. Annulus very broad, of 3–4 rows of cells. Seems to be dioecious. Male flowers unknown.

Oregon: Portland, moist sunny bluffs (*L. F. Henderson*). California (*Mrs. Ames*).

Closely allied to *B. provinciale* Philib., of which it is perhaps a subspecies, but differing in the larger size, the leaves more concave, cucullate at apex, with a reflexed apiculus, the margins more strongly serrate above, with a border generally denticulate on the back, and the longer, narrower capsule on a longer pedicel.

Monaco and Stenay, France.

EXPLANATION OF PLATES V, VI, VII.—Nearly all the figures drawn by means of Nachet's camera lucida:

PLATE V.—A. *Dicranella Langloisii*. *a*, entire plant; *b*, leaves; *c*, basal areolation; *d*, areolation of the upper part; *e*, leaf-point; *f*, perichaetial leaf; *g*, capsule with the lid; *h*, the same deoperculate.—B. *Dicranum consobrinum*. *a*, entire plant; *b*, upper part of the perichaetium; *c, c*, point of perichaetial bracts; *d*, capsule.—C. *Didymodon Hendersoni*. *a*, entire plant; *b*, lower leaf; *c, c*, upper leaves; *d, d, d*, point of the same; *e*, basal areolation, on the margin; *f*, areolation of the upper part; *g*, perichaetial bract; *h*, capsule; *i*, areolation of the capsular membrane; *i*, i**, ditto of *D. luridus*.

PLATE VI.—A. *Grimmia tenerrima*. *a*, entire plant; *b, b*, lower leaves; *c*, upper leaf; *d*, basal areolation; *e*, areolation of the upper part: *e**, ditto of *G. alpestris*; *f, f*, capsules; *g*, portion of the peristome.—B. *Coscinodon*

Renauldi; *a*, entire plant; *b*, the same enlarged; *c*, lower leaf; *d, d, d*, upper leaves; *e*, basal areolation; *f*, areolation of the upper part; *g*, transverse section of a leaf, in the upper part; *h*, young capsule; *i*, capsule, old and empty; *j*, portion of the peristome; *k*, calyptra.—C. *Funaria calcarea* var. *occidentalis*. *a*, entire plant; *b*, leaf.

PLATE VII.—A. *Orthotrichum Hendersoni*. *a*, entire plant; *b*, leaf; *c*, capsule; *d*, the same, old and empty; *e*, stoma; *f*, portion of the peristome.—B. *Orthotrichum ulotæforme*. *a*, entire plant; *b, b*, leaves; *c*, basal areolation; *d*, areolation in the upper part; *e*, capsule; *f*, the same, old and empty; *g*, stoma; *h*, portion of the peristome; *i*, calyptra.—C. *Bryum Hendersoni*. *a*, entire plant; *b*, leaves; *c*, upper part of a leaf; *d*, areolation of the apex; *e*, capsule.

Errata in preceding notice:

Page 96, line 5 below, instead of *branches*, read *branchlets*.

Page 96, line 6 below, instead of *nate*, read *long*.

Page 100, line 2, instead of *is*, read *closely*.

Plate XIII, C, add to the figure most to the right: *d. $\frac{240}{1}$* .

BRIEFER ARTICLES.

Poisonous action of *Clathrus columnatus*.—The odor of fully grown specimens of the order Phalloideæ is so repulsive that the question as to their poisonous character when eaten by men has not often been the subject of experiment. Most writers previous to Krombholz took it for granted that the common stink-horn, *Phallus impudicus*, was poisonous. The experiments of Krombholz on the canary bird, the tortoise, the dog, and on man, showed, however, that the fungus was not poisonous in those cases. Harzer apparently followed the statements of Krombholz, and more recently Goeppert says of *Phallus impudicus* that it can be eaten without harm, although he does not state the grounds of his belief. The lattice-fungus, *Clathrus cancellatus*, which has an odor as disagreeable as that of the rest of the order, is known to have proved poisonous in at least one case; that of a young girl who ate a small piece of the fungus, and was seized with violent convulsions followed by loss of speech and a deep sleep lasting 52 hours.

On October 31, 1889, I received a letter from Prof. Gerald McCarthy of Raleigh, N. C., saying that a number of hogs in that State had been killed by eating a fungus of which he wrote as follows: "It grows in patches in oak woods and openings and is greedily sought after and eaten by hogs who are generally killed by it within 12 or 15 hours." On the arrival of the specimen it proved to be one of the Phalloideæ, but the species could not be determined from the material sent and application